

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018737**Date Inspected:** 15-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr.Zhu Zhong Hai.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

NDT

OBG TRAL ASSEMBLY

This QA Inspector performed randomly Visual Inspection and Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6027 (UT) report for this date. The member is identified as OBG Deck plate To Edge plate. The weld designations reviewed are as follows.

FB028-011-165

SEG072*-045 (For heat treatment area)

NDT Notification No-07790

This QA Inspector observed the following work in progress:

OBG TRIAL ASSEMBLY

OBG Segment 12AE~12BE

This QA Inspector observed ZPMC qualified welding personnel identified as 040320 Perform Shielded Metal Arc

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Welding (SMAW) on OBG segment 12AE+12BE Side plate I rib cross beam side. Joint identified as SP3001-001-078. ZPMC QC Identified as Liu Hua Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-221-B-U2-FCM-1. For more information see below attached picture number 1.

This QA Inspector observed ZPMC qualified welding personnel identified as 053871 Perform Shielded Metal Arc Welding (SMAW) on OBG segment 12AE+12BE Side plate T rib cross beam side area. Joint identified as SP3004-001-160. ZPMC QC Identified as Liu Hua Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-221-B-U2-FCM-1.

OBG Segment 11EW~ 12AWRepair welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 040611 Perform Shielded Metal Arc Welding (SMAW) on OBG Side plate to bottom plate joint counter weight side. Joint identified as SEG073A-011 second time repair. ZPMC QC Identified as Shi Lie with temporary welding repair report WRR-B-WR 18073. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-1G (1F)-FCM-Repair.

OBG Segment 11EW~ 12AWRepair welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 046709 Perform Shielded Metal Arc Welding (SMAW) on OBG Side plate to bottom plate joint Cross beam side. Joint identified as SEG073A-012. ZPMC QC Identified as Shi Lie with temporary welding repair report WRR-B-WR 18072. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-1G (1F)-FCM-Repair. For more information see below attached picture number 2.

This QA Inspector observed ZPMC qualified welding personnel identified as 047353 Perform Shielded Metal Arc Welding (SMAW) on OBG segment 12AE+12BE Bottom plate T rib. Joint identified as BP3001-001-026. ZPMC QC Identified as Liu Hua Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2233-ESAB.

This QA Inspector observed ZPMC qualified welding personnel identified as 044473 Perform Shielded Metal Arc Welding (SMAW) on OBG segment 12AE+12BE Bottom plate T rib. Joint identified as BP3002-001-042. ZPMC QC Identified as Liu Hua Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2233-ESAB.

OBG Segment 12AE~12BE

This QA Inspector observed ZPMC qualified welding personnel identified as 040460, 050295 Perform Submerged Arc Welding (SAW) on OBG segment 12AE+12BE Deck plate to deck plate joint. Joint identified as OBE12-003. ZPMC CWI Identified as An Qing Xiang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-223(2) 1 T-ESAB.

OBG Segment 12AW~12BW

This QA Inspector observed ZPMC qualified welding personnel identified as 040759, 049220 Perform Flux Core Arc Welding (FCAW) on OBG segment 12AW+12BW Deck plate to deck plate joint. Joint identified as OBW12-001 cracks observed on weld after completed the root pass. ZPMC QC Identified as Zhao Peng. The

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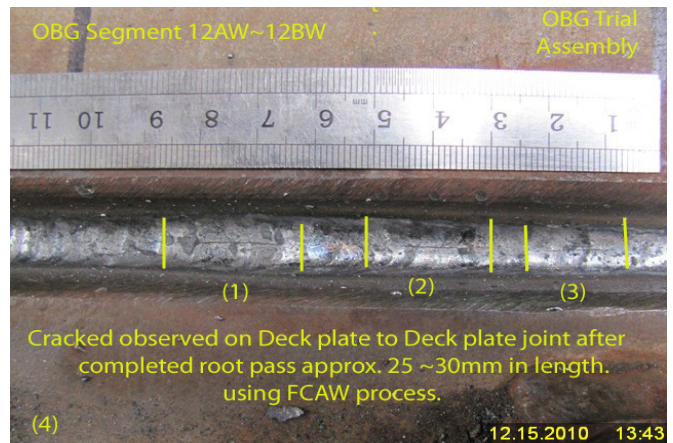
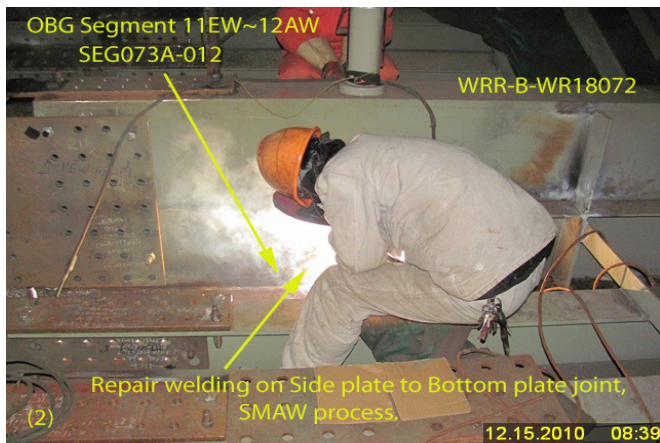
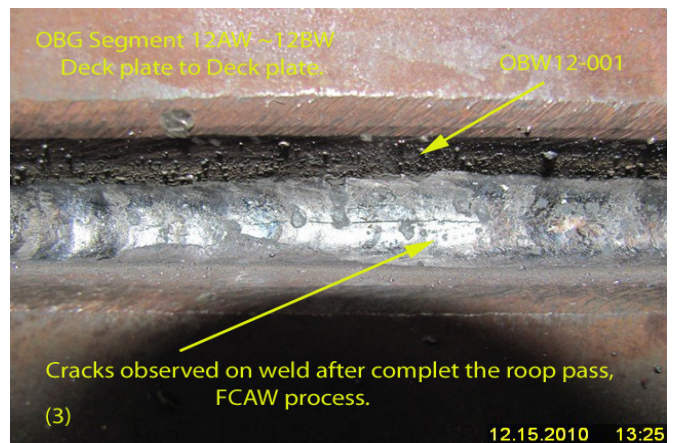
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welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-223(2) 1 T-ESAB. For more information see below attached picture number 3 and 4.

Visual Inspection after Blast at East Tower Lift —4

This Quality Assurance (QA) Inspector performed random visual inspection of East Tower Lift-4 inside Skin Plate A to E surfaces and diaphragm elevation 131M to 146M. After grit blasting at Blast shop number 1. Areas that marked for repair were recorded for future repair. And some areas requiring additional grinding were marked by QA Inspector and repaired by ZPMC personnel.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone :150-0042-2372, who represents the Office of Structural Materials for your project.

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Inspected By: Gaikwad,Shailesh

Quality Assurance Inspector

Reviewed By: Carreon,Albert

QA Reviewer